

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
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Gary Karlin Michelson)	
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Serial No.: 09/605,001)	Group Art Unit: 3764
)	
Filed: June 27, 2000)	Examiner: M. Brown
)	
For: APPARATUS AND METHOD OF)	
INSERTING SPINAL IMPLANTS)	

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

AMENDMENT

In reply to the Office Action dated June 11, 2001, please amend the application as follows:

IN THE CLAIMS:

Please cancel claim 1 without prejudice or disclaimer of its subject matter and add new claims 105-129 as follows:

--105. A method for performing a surgical procedure, comprising the steps of:
providing a surgical retractor including an elongate member defining a longitudinal axis, the elongate member including proximal and distal end portions and defining an opening therethrough to receive instrumentation, the distal end portion

configured for insertion at least partially into an intervertebral space between adjacent opposed vertebrae and having two spaced apart retractor arms, each retractor arm including first and second supporting surfaces laterally displaced with respect to each other and to the longitudinal axis;

distracting the adjacent vertebrae by at least partially inserting the retractor arms of the retractor within the intervertebral space whereby the first supporting surface of each retractor arm engages one vertebrae and the second supporting surface of each retractor arm engages the other vertebrae such that the adjacent opposed vertebrae are laterally displaced; and

performing the surgical spinal procedure.

106. The method according to claim 105 wherein the step of performing includes introducing surgical instrumentation within the opening of the surgical retractor, the surgical instrumentation being utilized to perform the surgical procedure.

107. The method according to claim 106 wherein the step of performing the surgical procedure includes introducing a fusion implant through the opening in the surgical retractor and between the distracted vertebrae to effect fusion thereof.

108. A method for fusing adjacent vertebral bodies, comprising the steps of:

- a) accessing the intervertebral disc space;
- b) providing a retractor including a retractor sleeve having proximal and distal end portions, the distal end portion having opposed retractor arms extending in a

general longitudinal direction;

c) positioning the retractor arms within the intervertebral disc space whereby first and second supporting surfaces of each arm contact opposed vertebral bodies;

d) introducing a drill instrument into the sleeve and advancing the drill instrument within the sleeve to the disc space;

e) forming with the drill instrument a bore that penetrates at least partially into each opposed vertebral body;

f) removing the drill instrument from the sleeve; and

g) introducing a fusion implant into the bore.

109. The method according to claim 108 further including the steps of:

h) introducing a tap instrument into the sleeve and advancing the tap instrument within the sleeve to the disc space;

i) tapping with the tap instrument a thread within the bore;

j) removing the tap from the retractor sleeve;

k) introducing into the sleeve a fusion cage having a cage body with an external thread; and

l) screwing the cage body into the threaded bore.

110. The method according to claim 109 wherein the step of introducing a fusion implant includes introducing a fusion implant having a plurality of openings extending through the cage body.

111. The method according to claim 110 further including the step of filling the cage body with bone-growth inducing substances.

112. The method according to claim 111 further including the step of mounting an end cap to the open end of the cage body to enclose the bone-growth inducing substances within the cage body.

113. The method according to claim 108 wherein the retractor arms define a dimension between the first and second supporting surfaces sufficient to distract the opposed vertebral bodies and wherein the step of positioning the retractor arms includes distracting the opposed vertebral bodies.

114. A surgical retractor instrument comprising an elongated sleeve member including proximal and distal end portions and defining a longitudinal axis, the elongated sleeve member defining a longitudinal passageway for reception of surgical instrumentation, the distal end portion having first and second retractor arms extending in a general longitudinal direction, each retractor arm having first and second opposed supporting surfaces for engaging respective opposed adjacent tissue portions, each retractor arm defining a dimension between the first and second supporting surfaces sufficient to distract the opposed tissue portions upon insertion thereof; and a cap engageable with the proximal end portion of the sleeve member, the cap for receiving the impact of a driving instrument used to engage the retractor instrument with the tissue portions.

115. The surgical retractor according to claim 114 wherein the first and second supporting surfaces of each retractor arm are substantially planar.

116. The surgical retractor according to claim 114 wherein each retractor arm has a tapered end portion for facilitating insertion into the tissue portions.

117. A surgical retractor for use in distracting adjacent vertebrae having an intervertebral space defined therebetween, the retractor comprising:

an elongate sleeve body having a proximal end and a distal end and the sleeve body having an opening in a side wall portion thereof defining a longitudinal passageway therebetween; and

first and second retractor arms extending longitudinally from the distal end of the elongate sleeve body, each retractor arm defining a first vertebra supporting surface to contact a first vertebra and a second vertebra supporting surface to contact a second vertebra, the first and second vertebra supporting surfaces of each retractor arm being spaced a predetermined distraction distance at least equal to the height of the intervertebral space defined between the adjacent vertebrae.

118. The surgical retractor according to claim 117 wherein the retractor arms each possess distal tapered portions for facilitating insertion into the intervertebral space.

119. The surgical retractor according to claim 117 wherein the first and second supporting surfaces of each retractor arm are in general parallel relation.

120. A surgical retractor for use in distracting adjacent vertebrae, comprising:
an elongate body having a proximal end and a distal end and defining a longitudinal passageway therebetween, the elongate body defining a longitudinal axis;
first and second retractor arms extending longitudinally from the distal end of the elongate body, each retractor arm defining a first vertebra supporting surface and a second vertebra supporting surface, the first and second vertebra supporting surfaces of each retractor arm being spaced a predetermined distance sufficient to contact the adjacent vertebrae to be in supporting engagement therewith, the first and second vertebra support surfaces being in general parallel relation with each other and to the longitudinal axis of the elongate body, and an impactor member mounted adjacent the proximal end of the elongate body and being dimensioned to receive the impact of the driving member utilized to position the first and second retractor arms with respect to the adjacent vertebrae.

121. A surgical retractor for use in distracting adjacent vertebrae, the retractor comprising:
an elongate sleeve body having a proximal end and a distal end and defining a longitudinal passageway therebetween, the elongate sleeve body including at least one longitudinal opening in an intermediate wall portion; and
first and second retractor arms extending longitudinally from the distal end of the elongate sleeve body, each retractor arm defining a first vertebra supporting surface to contact a first vertebra and a second vertebra supporting surface to contact a second

vertebra, the first and second vertebra supporting surfaces of each retractor arm being spaced thereon at a predetermined distraction distance.

122. A method for performing a surgical procedure comprising:

providing a surgical retractor including an elongate sleeve member having proximal and distal end portions and defining an opening therethrough to receive instrumentation, the distal end portion configured for insertion at least partially into an intervertebral space between adjacent opposed vertebrae;

distraction the adjacent vertebrae by at least partially inserting the distal end portion of the sleeve member within the intervertebral space;

inserting instrumentation through the opening in the surgical retractor; and
performing the surgical spinal procedure.

123. The method according to claim 122 wherein the step of performing the surgical spinal procedure includes utilizing the instrumentation inserted through the opening in the surgical retractor to perform the surgical spinal procedure.

124. The method according to claim 123 wherein the elongate sleeve member of the surgical retractor defines an axial opening and wherein the step of inserting includes positioning instrumentation through the axial opening to perform the surgical spinal procedure.

125. A method for performing a surgical procedure comprising:

providing a surgical retractor including an elongate hollow member having proximal and distal end portions, the distal end portion having first and second stationary retractor arms configured for insertion at least partially into an intervertebral space defined between upper and lower opposed vertebrae;

distracting the adjacent vertebrae to a predetermined distracted position by at least partially inserting the retractor arms within the intervertebral space; and

performing the surgical spinal procedure.

126. The method according to claim 125 wherein each retractor arm includes first and second opposed supporting surfaces and wherein the step of distracting includes at least partially inserting the retractor arms whereby the first and second supporting surfaces of each retractor arm respectively engage the upper and lower vertebrae.

127. A surgical retractor instrument comprising an elongated sleeve member including proximal and distal end portions and defining a longitudinal axis, the elongated sleeve member defining a longitudinal passageway for reception of surgical instrumentation, the distal end portion having first and second stationary retractor arms extending in a general longitudinal direction, each retractor arm having opposed distracting surfaces, the distracting surfaces of each retractor arm laterally spaced with respect to the longitudinal axis at a predetermined distraction distance sufficient to distract the opposed tissue portions upon insertion thereof the sleeve member including an opening in an outer wall thereof proximate the distal end portion of the sleeve member.

128. The surgical retractor according to claim 117 wherein the distraction distance of each retractor arm is greater than the height of the intervertebral space.

129. The surgical retractor according to claim 127 wherein the distal end portion is dimensioned for insertion within the intervertebral space defined between adjacent vertebrae and wherein the distraction distance defined between the opposed distracting surfaces of each retractor is at least equal to the height of the intervertebral space.--.

REMARKS

Applicant filed Information Disclosure Statements on August 29, 2000 and February 15, 2001 and have yet to receive the signed Forms PTO-1449. Applicant respectfully requests that the Examiner consider the listed documents, indicate that they were considered by making appropriate notations on the Forms PTO-1449, and return the forms to the undersigned.

In the Office Action dated June 11, 2001, the Examiner rejected claim 1 under 35 U.S.C. § 102(b) as being clearly anticipated by U.S. Patent No. 3,875,595 to Froning. Applicant traverses the rejection and submits that pins 33 of tube 31 do not distract and align the adjacent vertebrae. Pins 33 engage the vertebrae to hold tube 31 in place during the surgical procedure. Nonetheless, by this Amendment, Applicant has cancelled claim 1 thereby rendering the rejection moot to pursue new claims 105-129 directed to the below-identified interfering subject matter.

New claims 105-129 have been added to the application to further define Applicant's claimed invention. Pursuant to 37 C.F.R. § 1.607(c), Applicant brings to the attention of the Examiner that new claims 105-129 correspond exactly or substantially to claims 1-3 and 5-26, respectively, of U.S. Patent No. 6,083,225 issued to Winslow et al. on July 4, 2000, a copy of which is attached for the Examiner's convenience.

In view of the foregoing amendments and remarks, Applicant respectfully requests the reconsideration of this application and a notice of declaration of interference.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 50-1066.

Respectfully submitted,

MARTIN & FERRARO, LLP

Dated: July 3, 2001

By: 

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